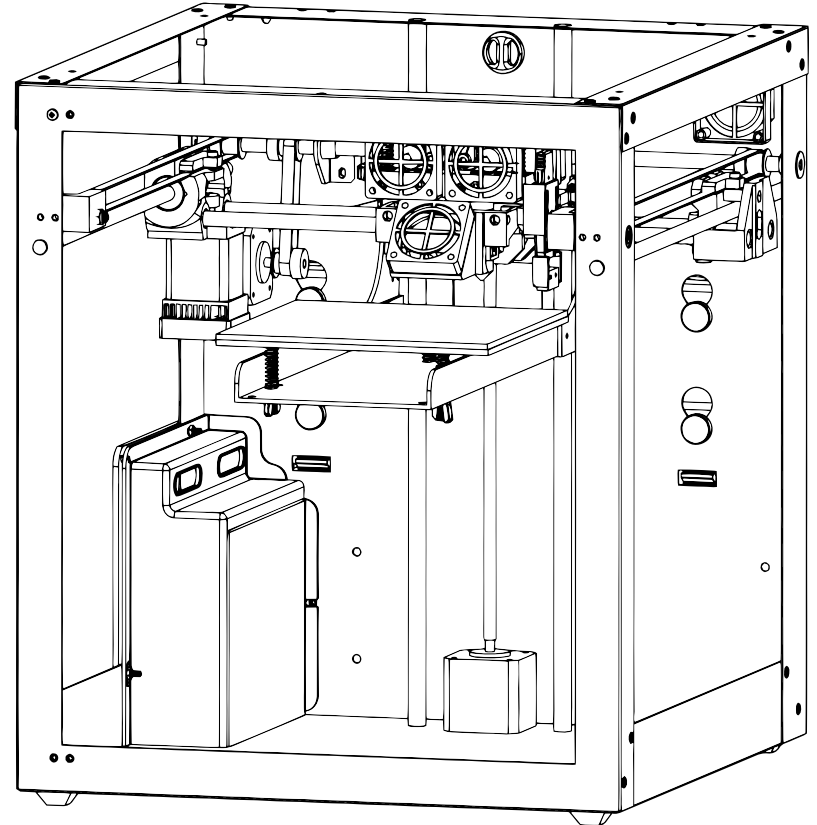




Workbench Apprentice

INSTRUCTION MANUAL

SAFETY INSTRUCTIONS



-  Be certain that your power source conforms to the electrical requirements of the printer.
-  To reduce the risk of personal injury and electrical damage, the printer should not be modified from its factory default components.
-  Avoid plugging your printer into the same circuit as power hungry devices such as A/C compressors, space heaters, or other demanding appliances.
-  Make certain that the room has a working smoke detector equipped.
-  Do NOT use printer in or near windows or in outdoor areas. Rain and other weather conditions may create hazardous conditions.
-  This printer cannot be used in wet or damp locations. Do not keep near any liquids that may spill on the printer. Do not keep printer on any surface that it could fall into a container with liquid.
-  Never operate the printer with damaged components or after the printer has been damaged in any manner.
-  In case of emergency, disconnect the power cord from your wall outlet as well as the USB cable from the computer.
-  **WARNING:** THERE IS A RISK OF ELECTRICAL SHOCK. UNIT IS NOT USER SERVICEABLE.
-  **WARNING:** SOLIDOODLE PRINTERS CONTAIN HEATED MOVING PARTS. NEVER REACH INSIDE THE PRINTER WHILE IT IS IN OPERATION OR BEFORE IT HAS COOLED DOWN.
-  **WARNING:** KEEP HANDS, LOOSE CLOTHING, AND JEWELRY AWAY FROM PRINTER WHEN OPERATING - MOVING PARTS CAN CATCH, SNAG OR PINCH.
-  **WARNING:** NEVER LEAVE YOUR SOLIDOODLE PRINTER UNATTENDED WHILE POWERED ON OR PRINTING.
-  **WARNING:** DISCONNECT YOUR SOLIDOODLE PRINTER FROM THE POWER SUPPLY AND COMPUTER WHEN NOT IN USE.
-  **WARNING:** DO NOT ATTEMPT TO PRINT MATERIALS NOT APPROVED BY SOLIDOODLE.
-  **WARNING:** ONLY OPERATE YOUR SOLIDOODLE PRINTER IN A WELL-VENTILATED SPACE AWAY FROM MOISTURE AND HEAT SOURCES WITH A WORKING SMOKE/FIRE ALARM.

We understand that some customers may choose to modify their printers. Solidoodle tests and warrants its products based on their configurations as sold. We are unable to guarantee the performance or safety of products that have been modified by users or third parties.

Unauthorized Repairs

We do not recommend attempting to repair or have third parties repair your printers in any manner not specified by the Solidoodle Best Practices or the Solidoodle Customer Support Team. If unauthorized repairs result in damage to your printer, Solidoodle may no longer be able to provide customer support under the terms of the Limited Warranty.

Modified Printers

We understand that some customers may choose to modify their printers. Solidoodle tests and warrants its products based on their configurations as sold. We are unable to guarantee the performance or safety of products that have been modified by users or third parties. Please be aware that modified printers may not be eligible for coverage under the Solidoodle Limited 60-Day Warranty, or for exchange, refund, or repair in our factory, and that Solidoodle may not be able to assist you with issues arising from modifications you have done to our printers. The Solidoodle Customer Support Team will review issues concerning modified printers on a case-by-case basis to determine what support, if any, we can provide.

Limitations

THE SOLIDOODLE LIMITED 60-DAY WARRANTY IS YOUR SOLE AND EXCLUSIVE REMEDY AGAINST SOLIDOODLE WHERE PERMITTED BY LAW. EXCEPT FOR THIS LIMITED WARRANTY, SOLIDOODLE MAKES NO OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, TRADE USAGE, OR OTHERWISE, WITH REGARD TO THE PERFORMANCE OF ANY PRODUCT. WITHOUT LIMITATION OF THE FOREGOING, SOLIDOODLE DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND WARRANTY AGAINST HIDDEN OR LATENT DEFECTS, TO THE EXTENT PERMITTED BY LAW. IN SO FAR AS SUCH WARRANTIES CANNOT BE DISCLAIMED, SOLIDOODLE LIMITS THEIR DURATION AND REMEDIES TO THE DURATION OF THE SOLIDOODLE LIMITED 60-DAY WARRANTY, AND THE REPAIR AND REPLACEMENT SERVICES PROVIDED THEREIN.

IN NO EVENT WILL SOLIDOODLE BE LIABLE TO YOU OR TO ANYONE ELSE FOR ANY INDIRECT, INCIDENTAL, COLLATERAL, EXEMPLARY, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING LOSS OF USE OR LOSS OF PROFITS, ARISING OUT OF THE USE, INABILITY TO USE, OR THE RESULTS OF USE OF SOLIDOODLE PRODUCTS, WHETHER BASED ON WARRANTY, CONTRACT, TORT, OR ANY OTHER LEGAL THEORY, WHETHER OR NOT SOLIDOODLE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH CLAIMS OR DAMAGES.

TO THE EXTENT THE ABOVE LIMITATIONS ON IMPLIED WARRANTIES AND INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE PROHIBITED BY STATE LAW, THEY MAY NOT APPLY TO YOU.



Solidoodle recommends the following Best Practices for the safe and effective use of its printers. Following these best practices can help you and your printer avoid risks and disqualification from your warranty coverage and customer support.

Operation

- Never reach inside your printer when it is turned on. Moving parts can cut or pinch you, and several parts reach high temperatures that can cause burns and other injuries.
- Always allow your printer to cool down for at least 5 minutes before you touch any internal part or remove a printed object.
- Never leave your printer unattended while printing or powered on.
- Always turn off your printer and disconnect it from your computer when not in use.
- Never attempt to print materials that have not been approved by Solidoodle.
- Keep the nozzle tip at least two inches away from the heated build platform anytime you are not running a print job.
- Never operate your printer if it appears damaged.
- In case of an emergency or malfunction, immediately disconnect your printer from the power outlet and computer.

Connectivity

- To avoid printing interruptions, disable your screensaver, sleep, and hibernate functions on your computer.
- Make sure the heating plate and extruder are not heated when starting software.

Modifications

- Solidoodle printers are tested for performance and safety before they leave the factory. Solidoodle cannot guarantee the performance or safety of printers that have been modified by users.

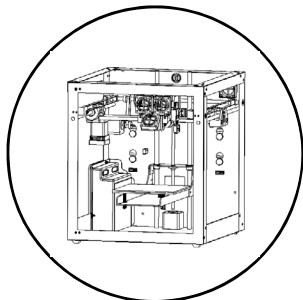
Placement

- Always operate your Solidoodle printer in an open, well-ventilated area to allow potentially irritating fumes to dissipate.
- Never operate your Solidoodle printer outdoors, near open windows, or anywhere where it may be exposed to water or moisture.
- Always place your Solidoodle printer on a flat and sturdy surface to avoid power interruptions and deformities in your prints.
- Never place objects on or above your Solidoodle printer or power supply.
- Always have a working fire and smoke alarm in the same room as your Solidoodle printer.
- Never place your Solidoodle printer near open flames, heat sources, or flammable materials.

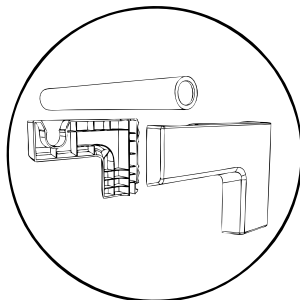
Power

- Plug your computer and printer into the same power outlet for best performance.
- We recommend plugging your Solidoodle printer into a surge protector with a circuit breaker.
- Never attempt to open or fix your power supply. If you believe your power supply is not working properly, contact the Solidoodle Customer Support Team at support.solidoodle.com.
- Only use the power supply that was provided with your Solidoodle printer.
- Do not plug your Solidoodle printer into the same outlet as power hungry devices such as air conditioners, space heaters, or other large appliances.

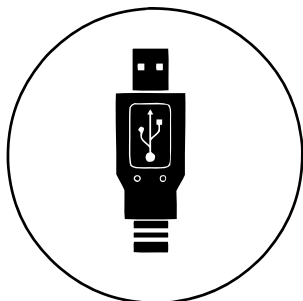
WHAT'S IN THE BOX?



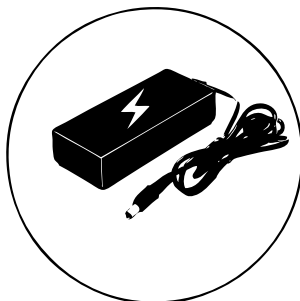
Workbench Apprentice
3D Printer



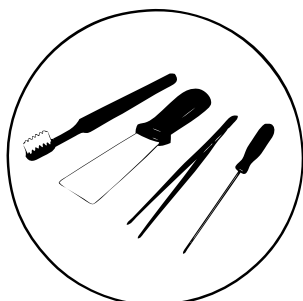
Snap-On
Spool Mount



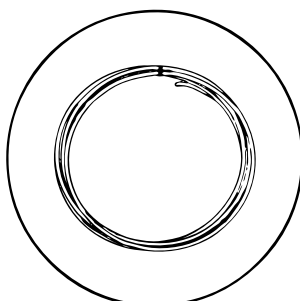
USB Cord



Power Supply
150W



Tool Kit



Starter Filament

If you are unable to install a replacement part yourself to resolve a Covered or Non-Covered Issue, you can ship the printer back to us at your expense, and we will replace the part and ship it back to you at our cost.

Repairs

If your printer is experiencing an issue that cannot be remedied by replacing a part, you may need to return the printer to us for repair. Your printer will be inspected, repaired as needed, and recalibrated to its original condition. If a Covered Issue requires such a repair, we will pay for shipping to us and back to you. If a Non-Covered Issue requires such a repair and you are not enrolled in SoliCare, you will pay for shipping to us and back to you.

Most repairs are completed and shipped back to the customer within 2 weeks of arriving at our factory.

Spare Parts

If a spare part purchased from Solidoodle is deemed defective within sixty (60) calendar days of shipping, it will be replaced at no charge and we will pay for shipping. Spare parts that break down due to normal usage are not eligible for free replacements. We may also request that you return the defective part at your expense before we ship the replacement. Spare parts deemed defective outside sixty (60) calendar days of shipping may be replaced at your cost.

Return

Our Customer Support Team may occasionally determine that the best course of action to remedy an Issue is to exchange your printer for a new one. For Covered Issues, we will send you a shipping label and will pay for shipping to us and back to you. For Non-Covered Issues, you will pay to ship the printer to us and we will pay to ship the new one to you.

Refund

If you would like to return your printer and receive a refund, please submit a request at support.solidoodle.com. Refund requests must be made within thirty (30) calendar days of the shipment date. Unless the Solidoodle Support Team determines that the printer is defective and issues an RMA, a 10% restocking fee will be deducted from the refund.

Refunds are not available for the SoliCare Protection Plan, shipping costs, opened/used filament, installed replacement parts, Solidoodle Sample Pack, or Solidoodle T-shirts. Refunds are available only for items purchased from Solidoodle.com. Refunds for products purchased from resellers are subject to resellers' policies.

Unauthorized Returns

Printers or parts sent in without a Return Merchandise Authorization Form will not be eligible for repair, replacement, or refund unless approved by Solidoodle Customer Support. Unauthorized items will take longer to be resolved and may incur additional charges for parts, labor and shipping.

Solidoodle Limited 60-Day Warranty for Solidoodle Printers

*Subject to periodic revision: see Solidoodle.com/warranty for latest version.

What Does the Warranty Cover?

This warranty covers any manufacturing defects or shipping damage that you, the first purchaser, discover within sixty (60) days of when your new Solidoodle printer ships to you in the United States ("Covered Issues").

What Will Solidoodle Do?

The Solidoodle Customer Support Team will work with you to remedy any issues you experience with your new Solidoodle printer. If a part must be replaced to remedy a Covered Issue, Solidoodle will send you a replacement part at no charge to you. If the Solidoodle Customer Support Team determines that the printer needs to be repaired or replaced to remedy a Covered Issue, Solidoodle will send you a mailing label to ship the printer back to Solidoodle and will repair or replace the printer at no cost to you.

What Does This Warranty Not Cover?

This Limited Warranty does not cover any issues not addressed through Solidoodle Customer Support, that are identified outside of sixty (60) days of shipping your new Solidoodle printer, or that are attributable to (i) normal wear and tear, (ii) unauthorized modifications, alterations, or repairs, (iii) use of unapproved third-party filaments or other products, (iv) abuse, misuse, or neglect, (v) exposure of the printer to moisture, flooding, fire, or improper electrical current, (vi) Acts of God, or (vii) failure to follow Solidoodle's Best Practices, (together, "Non-Covered Issues"). Solidoodle will determine in its sole discretion whether an issue is a Covered or Non-Covered Issue.

How Do You Get Service?

To obtain service under this Warranty, you must initiate a request at support.solidoodle.com. Printers or parts returned without a Return Merchandise Authorization Form will not be serviced.

How Does State Law Apply?

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Replacement Parts

If our Customer Support Team determines that a Covered Issue is caused by defective hardware, we will replace the defective part at no charge.

If our Customer Support Team determines that you are experiencing a Non-Covered Issue, and you have not enrolled in SoliCare, we will provide a replacement part at standard cost and shipping. We may also request that you return the defective part before we ship the replacement.

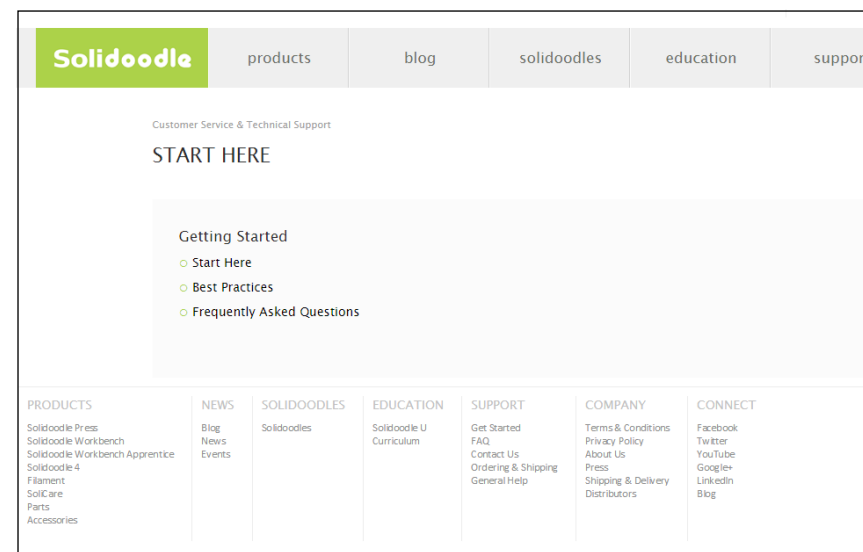
Unpacking

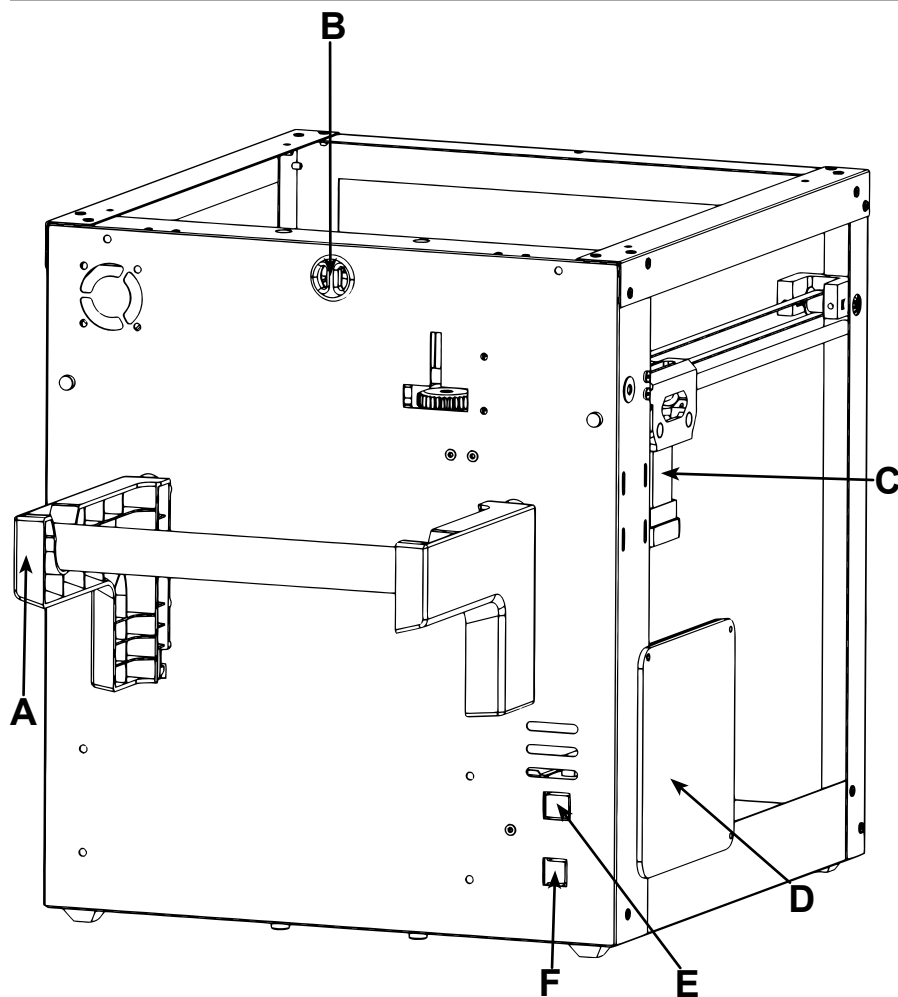
After receiving your Solidoodle 3D printer, please ensure that all of the parts listed on page 3 are included in your package.

Next, remove the orange or yellow shipping clips that have secured your printer during shipping. Also cut the orange or yellow cable tie that is wrapped around the extruder.

To get started, go to support.solidoodle.com and click on the "Start Here" link.

Here you will find instructions for setting up your printer and installing our software.





A. Snap-On Spool Mount

B. Filament Port

C. X - Axis Motor

D. Internally Mounted Electronics

E. Power Connector

F. USB Port

Notice

The information in this user's manual is subject to change without notice.

The manufacturer or reseller shall not be liable for errors or omissions contained in this manual and shall not be liable for any consequential damages, which may result from the performance or use of this manual.

The information in this user's manual is protected by copyright laws. No part of this manual may be photocopied or reproduced in any form without prior written authorization from the copyright owners.

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All Rights Reserved

Product names mentioned herein may be trademarks and/or registered trademarks of their respective owners/companies.

Product(s) are subject to change, revision, or improvement(s).

Licensing Information

The Solidoodle motherboard uses the CC Sharealike license.

A copy of the license can be found at:
<http://creativecommons.org/licenses/by-sa/3.0/>

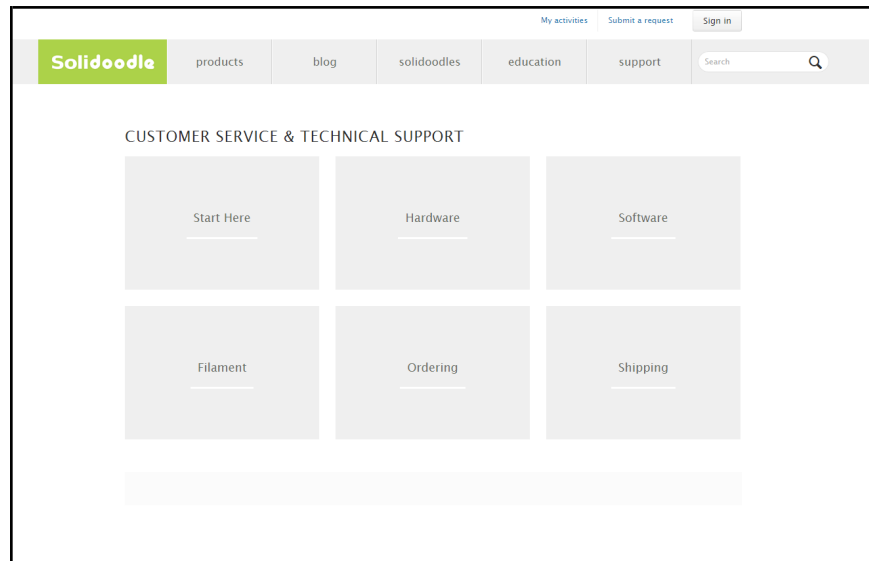
The Solidoodle's Marlin firmware uses the GNU GPL 3.0 license.

A copy of the license can be found at:
<https://www.gnu.org/copyleft/gpl.html>

Sources for both the motherboard and firmware are available at:
<http://www.solidoodle.com/solidoodle-motherboard-source-files-and-firmware/>

RESOURCES

Customer Support Center



Online Resources

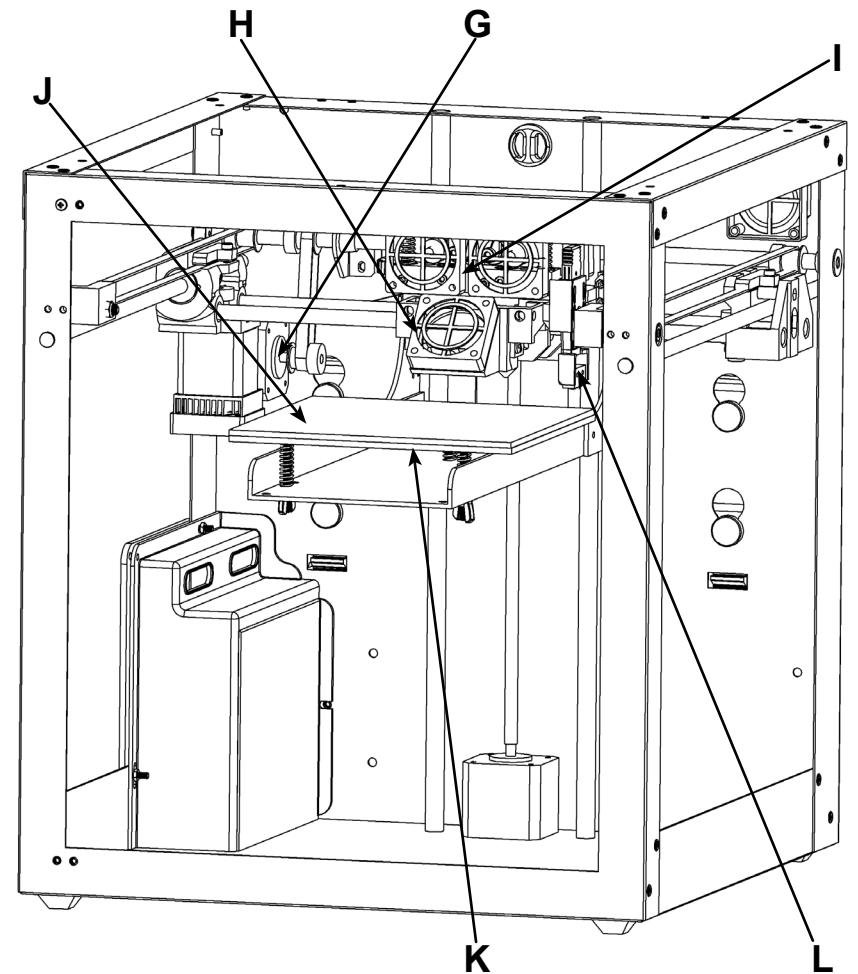
Join one of our online communities or connect with us on social media!



facebook.com/Solidoodle



[@Solidoodle3D](https://twitter.com/Solidoodle3D)



G. Y Axis Motor

H. Extruder Fan

I. Dual Extruder + Fan

J. 6"x6" Glass Bed

K. Aluminum Build Plate + Heat Pad

L. SoliTouch Probe

M. Z Axis Motor + Threaded Rod

For more information about your printer
please visit <http://www.solidoodle.com>

Printing Specifications

Print Technology	Fused Filament Fabrication
Build Volume	6" L x 6" W x 8" H
Layer Resolution	100 Microns (0.1mm)
	200 Microns (0.2mm)
	300 Microns (0.3mm)
	400 Microns (0.4mm)
Filament Type	ABS (recommended), PLA
Filament Diameter	1.75mm
Nozzle Diameter	0.4mm

Temperature

Print Bed	0° - 115° C
Extruder	0° - 210° C
Storage	0° - 60° C

Electrical

AC Input	100 - 240 V, 1.8A - 0.6A, 50-60 Hz
Power Requirements	12 V DC @ 12.5 A
Connectivity	USB

Mechanical

Chasis	Internal Steel Frame
Build Platform	Aluminum
Motors	1.8° step angle
	1/16 microstepping

General Care And Maintenance

- As with all electronic equipment, it is important to keep your Solidoodle 3D Printer clean to extend its life. Regularly remove dust and debris build-up with a microfiber cloth or compressed air.
- Don't leave the heaters on your Solidoodle 3D Printer turned on for extended periods of time when not in use.
- The X,Y, and Z axes of your Solidoodle 3D Printer come lubricated with grease for smooth operation and should last a long time. Grease may need to be re-applied to your printer to continue smooth performance. We recommend multi-purpose lithium grease.
- Avoid positioning your power supply unit in such a way that the brick is hanging, pulling, or putting any unnecessary stress on the electrical wires and components.
- Happy Printing!